

### **REMARKS/ARGUMENTS**

Claims 1-42 are pending in the application. Claims 8, 11-21, and 29-42 were previously withdrawn. Applicant respectfully requests reconsideration of Claims 1-7, 9, 10 and 22-28 in view of the following remarks.

#### **Claim Rejections – 35 U.S.C. § 103**

The Examiner has rejected Claims 1-7, 9-10, and 22-28 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,693,223 ("Yamada") in view of U.S. Patent No. 6,280,619 ("Lacy") and U.S. Patent No. 6,953,526 ("Fritze").

Yamada does not teach or suggest the subject matter of independent Claim 1. As noted by the Examiner, Yamada does not teach or suggest a chromatography cartridge comprising a plug positioned within the open end and having an outer circumferential surface, a substantial portion of the outer circumferential surface being fused to the inner surface of the tubular housing.

Lacy and Fritze do not cure the deficiencies of Yamada. The Examiner indicates that "Lacy ... discloses spin welding a cap to the cartridge to 'meld their adjacent surfaces together' for the obvious purpose of preventing leaking." The Examiner also indicates that "Fritze ... confirms spin welding minimizes leaks." The Examiner further indicates that "it would have been obvious to spin weld in ... Yamada ... because Lacy ... discloses spin welding a cap to the cartridge to 'meld their adjacent surfaces together' for the obvious purpose of preventing leaking and Fritze ... confirms spin welding minimizes leaks."

Applicant respectfully points out that the Examiner's reasons for combining Yamada, Lacy, and Fritze in the present application contradict the Examiner's reasons for allowance of U.S. Patent Application Serial No. 10/697,496 (now U.S. Patent No. 7,008,541). The Examiner issued a Notice of Allowability, dated April 13, 2005 in U.S. Patent Application Serial No. 10/697,496 that states

[t]he following is an examiner's statement of reasons for allowance: Yamada (U.S. Patent No. 5,693,223), Nakaso (U.S. Patent No. 5,360,544), and Lacey [sic] (U.S. Patent No. 6,280,619) are considered to be the closest prior art because Yamada (U.S. Patent No. 5,693,223) and Nakaso (U.S. Patent No. 5,360,544) disclose similar apparatus and Lacey [sic] (U.S. Patent No. 6,280,619) discloses spin welding. The case has been allowed because the recited combination of steps would not have been obvious from Yamada (U.S. Patent No. 5,693,223), Nakaso (U.S. Patent No. 5,360,544), and Lacey [sic] (U.S. Patent No. 6,280,619).

U.S. Patent Application Serial No. 10/697,496, Notice of Allowability, dated April 13, 2005.

Therefore, the Examiner has failed to provide the necessary suggestion or motivation to combine Yamada, Lacy, and Fritze. For at least these reasons, the combination of Yamada, Lacy, and Fritze do not teach or suggest the subject matter of Claim 1. Accordingly, independent Claim 1 is allowable. Claims 2-7 and 9-10 depend from Claim 1 and are allowable for the same and other reasons.

Yamada does not teach or suggest the subject matter of independent Claim 22. As noted by the Examiner, Yamada does not teach or suggest a chromatography cartridge comprising a plug positioned within the open end of the tubular housing and having an outer circumferential surface, at least a portion of the outer circumferential surface being fused to the inner surface of the tubular housing.

Lacy and Fritze do not cure the deficiencies of Yamada. As noted above, the Examiner has failed to provide the necessary suggestion or motivation to combine Yamada, Lacy, and Fritze.

For at least these reasons, the combination of Yamada, Lacy, and Fritze do not teach or suggest the subject matter of Claim 22. Accordingly, independent Claim 22 is allowable. Claims 23-28 depend from Claim 22 and are allowable for the same and other reasons.

The Examiner also has rejected Claims 1-7, 9-10, and 22-28 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,360,526 ("Nakaso") in view of Lacy and Fritze.

Nakaso does not teach or suggest the subject matter of independent Claim 1. As noted by the Examiner, Nakaso does not teach or suggest a chromatography cartridge comprising a plug positioned within the open end and having an outer circumferential surface, a substantial portion of the outer circumferential surface being fused to the inner surface of the tubular housing.

Lacy and Fritze do not cure the deficiencies of Nakaso. The Examiner indicates that "Lacy ... discloses spin welding a cap to the cartridge to 'meld their adjacent surfaces together' for the obvious purpose of preventing leaking." The Examiner also indicates that "Fritze ... confirms spin welding minimizes leaks." The Examiner further indicates that "it would have been obvious to spin weld in ... Nakaso ... because Lacy ... discloses spin welding a cap to the cartridge to 'meld their adjacent surfaces together' for the obvious purpose of preventing leaking and Fritze ... confirms spin welding minimizes leaks."

Applicant respectfully points out that the Examiner's reasons for combining Nakaso, Lacy, and Fritze in the present application contradict the Examiner's reasons for allowance of U.S. Patent Application Serial No. 10/697,496 (now U.S. Patent No. 7,008,541). The Examiner

issued a Notice of Allowability, dated April 13, 2005 in U.S. Patent Application Serial No. 10/697,496 that states

[t]he following is an examiner's statement of reasons for allowance: Yamada (U.S. Patent No. 5,693,223), Nakaso (U.S. Patent No. 5,360,544), and Lacey [sic] (U.S. Patent No. 6,280,619) are considered to be the closest prior art because Yamada (U.S. Patent No. 5,693,223) and Nakaso (U.S. Patent No. 5,360,544) disclose similar apparatus and Lacey [sic] (U.S. Patent No. 6,280,619) discloses spin welding. The case has been allowed because the recited combination of steps would not have been obvious from Yamada (U.S. Patent No. 5,693,223), Nakaso (U.S. Patent No. 5,360,544), and Lacey [sic] (U.S. Patent No. 6,280,619).

U.S. Patent Application Serial No. 10/697,496, Notice of Allowability, dated April 13, 2005.

Therefore, the Examiner has failed to provide the necessary suggestion or motivation to combine Nakaso, Lacy, and Fritze. For at least these reasons, the combination of Nakaso, Lacy, and Fritze do not teach or suggest the subject matter of Claim 1. Accordingly, independent Claim 1 is allowable. Claims 2-7 and 9-10 depend from Claim 1 and are allowable for the same and other reasons.

Nakaso does not teach or suggest the subject matter of independent Claim 22. As noted by the Examiner, Nakaso does not teach or suggest a chromatography cartridge comprising a plug positioned within the open end of the tubular housing and having an outer circumferential surface, at least a portion of the outer circumferential surface being fused to the inner surface of the tubular housing.

Lacy and Fritze do not cure the deficiencies of Nakaso. As noted above, the Examiner has failed to provide the necessary suggestion or motivation to combine Nakaso, Lacy, and Fritze.

For at least these reasons, the combination of Nakaso, Lacy, and Fritze do not teach or suggest the subject matter of Claim 22. Accordingly, independent Claim 22 is allowable. Claims 23-28 depend from Claim 22 and are allowable for the same and other reasons.

The Examiner has rejected Claims 7 and 28 under 35 U.S.C. § 103 as being unpatentable over Yamada in view of Lacy and Fritze, and further in view of U.S. Patent No. 6,454,891 ("Goss").

Claim 7 depends from independent Claim 1 and is allowable for the same and other reasons. Claim 7 further specifies that the cartridge has a longitudinal axis, and further comprising a plurality of axially-directed bores defined in an upper surface of the plug to provide coupling between a mechanical drive device and the plug.

Goss does not cure the deficiencies of Yamada, Lacy, and Fritze. As noted above, there is no suggestion or motivation to combine Yamada, Lacy, and Fritze. Goss does not provide the necessary suggestion or motivation to combine Yamada, Lacy, Fritze and Goss.

Accordingly, Claim 7 is allowable.

Claim 28 depends from independent Claim 22 and is allowable for the same and other reasons. Claim 22 further specifies at least one axially-extending bore defined in an upper surface of the plug to provide coupling between a mechanical drive device and the plug.

Goss does not cure the deficiencies of Yamada, Lacy, and Fritze. As noted above, there is no suggestion or motivation to combine Yamada, Lacy, and Fritze. Goss does not provide the necessary suggestion or motivation to combine Yamada, Lacy, Fritze and Goss.

Accordingly, Claim 28 is allowable.

The Examiner has rejected Claims 7 and 28 under 35 U.S.C. § 103 as being unpatentable over Nakaso in view of Lacy and Fritze, and further in view of U.S. Patent No. 6,454,891 ("Goss").

Claim 7 depends from independent Claim 1 and is allowable for the same and other reasons. Claim 7 further specifies that the cartridge has a longitudinal axis, and further comprising a plurality of axially-directed bores defined in an upper surface of the plug to provide coupling between a mechanical drive device and the plug.

Goss does not cure the deficiencies of Nakaso, Lacy, and Fritze. As noted above, there is no suggestion or motivation to combine Nakaso, Lacy, and Fritze. Goss does not provide the necessary suggestion or motivation to combine Nakaso, Lacy, Fritze and Goss. Accordingly, Claim 7 is allowable.

Claim 28 depends from independent Claim 22 and is allowable for the same and other reasons. Claim 28 further specifies at least one axially-extending bore defined in an upper surface of the plug to provide coupling between a mechanical drive device and the plug.

Goss does not cure the deficiencies of Nakaso, Lacy, and Fritze. As noted above, there is no suggestion or motivation to combine Nakaso, Lacy, and Fritze. Goss does not provide the necessary suggestion or motivation to combine Nakaso, Lacy, Fritze and Goss. Accordingly, Claim 28 is allowable.

The Examiner rejected Claim 9 under 35 U.S.C. § 103 as being unpatentable over Yamada in view of Lacy and Fritze, and further in view of U.S. Patent No. 5,089,654 ("Hou").

Claim 9 depends from independent Claim 1 and is allowable for the same and other reasons. Claim 9 further specifies a cover positioned over the plug and tubular housing to hide at least a portion of the plug.

Hou does not cure the deficiencies of Yamada, Lacy, and Fritze. As noted above, there is no suggestion or motivation to combine Yamada, Lacy, and Fritze. Hou does not provide the necessary suggestion or motivation to combine Yamada, Lacy, Fritze and Goss. Accordingly, Claim 9 is allowable.

The Examiner rejected Claim 9 under 35 U.S.C. § 103 as being unpatentable over Nakaso in view of Lacy and Fritze, and further in view of U.S. Patent No. 5,089,654 ("Hou").

Claim 9 depends from independent Claim 1 and is allowable for the same and other reasons. Claim 9 further specifies a cover positioned over the plug and tubular housing to hide at least a portion of the plug.

Hou does not cure the deficiencies of Nakaso, Lacy, and Fritze. As noted above, there is no suggestion or motivation to combine Nakaso, Lacy, and Fritze. Hou does not provide the necessary suggestion or motivation to combine Nakaso, Lacy, Fritze and Goss. Accordingly, Claim 9 is allowable.

The Examiner rejected Claims 1-7, 9-10, and 22-28 under 35 U.S.C. § 102 as anticipated by Hou. Alternatively, the Examiner rejected Claims 1-7, 9-10, and 22-28 under 35 U.S.C. § 103 as obvious over Hou.

Hou does not teach or suggest the subject matter of independent Claim 1. Specifically, Hou does not teach or suggest a chromatography cartridge comprising a plug positioned within the open end and having an outer circumferential surface, a substantial portion of the outer circumferential surface being fused to the inner surface of the tubular housing. Applicant respectfully points out that the Examiner has not shown where Hou discloses this subject matter. Furthermore, the Examiner has indicated, in the next paragraph of the Office action, that Hou does not teach or suggest this subject matter. See Office action dated November 30, 2006, page 4.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the

reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." M.P.E.P. § 2142 *citing In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The Examiner indicates that "it would have been obvious to optimize the elements of Hou to enhance separation." The Examiner has provided no legitimate suggestion or motivation for optimizing Hou, and has only provided a conclusion of a broad desirable result.

For at least these reasons, Hou does not teach or suggest the subject matter of Claim 1. Accordingly, independent Claim 1 is allowable. Claims 2-7 and 9-10 depend from Claim 1 and are allowable for the same and other reasons.

Hou does not teach or suggest the subject matter of independent Claim 22. Specifically, Hou does not teach or suggest a chromatography cartridge comprising a plug positioned within the open end of the tubular housing and having an outer circumferential surface, at least a portion of the outer circumferential surface being fused to the inner surface of the tubular housing. Applicant respectfully points out that the Examiner has not shown where Hou discloses this subject matter. Furthermore, the Examiner has indicated, in the next paragraph of the Office action, that Hou does not teach or suggest this subject matter. See Office action dated November 30, 2006, page 4.

As noted above, the Examiner has provided no legitimate suggestion or motivation for optimizing Hou, and has only provided a conclusion of a broad desirable result.

For at least these reasons, Hou does not teach or suggest the subject matter of Claim 22. Accordingly, independent Claim 22 is allowable. Claims 23-28 depend from Claim 22 and are allowable for the same and other reasons.

The Examiner rejected Claims 1-7, 9-10, and 22-28 under 35 U.S.C. § 103 as being unpatentable over Hou in view of Lacy and Fritze.

Hou does not teach or suggest the subject matter of independent Claim 1. As noted by the Examiner, Hou does not teach or suggest a chromatography cartridge comprising a plug positioned within the open end and having an outer circumferential surface, a substantial portion of the outer circumferential surface being fused to the inner surface of the tubular housing.

Lacy and Fritze do not cure the deficiencies of Hou. The Examiner indicates that "Lacy ... discloses spin welding a cap to the cartridge to 'meld their adjacent surfaces together' for the obvious purpose of preventing leaking." The Examiner also indicates that "Fritze ... confirms spin welding minimizes leaks." The Examiner further indicates that "it would have been obvious to spin weld in Hou ... because Lacy ... discloses spin welding a cap to the cartridge to 'meld

their adjacent surfaces together' for the obvious purpose of preventing leaking and Fritze ... confirms spin welding minimizes leaks."

Hou does not disclose subject matter substantially different than either Yamada or Nakaso, which were used above in a similar rejection. In addition, Hou does not provide the necessary suggestion or motivation to be combined with Lacy and Fritze. As noted above, the Examiner stated, in U.S. Patent Application Serial No. 10/697,496, that "the recited combination of steps would not have been obvious from Yamada (U.S. Patent No. 5,693,223), Nakaso (U.S. Patent No. 5,360,544), and Lacey [sic] (U.S. Patent No. 6,280,619)." Therefore, the Examiner has failed to provide the necessary suggestion or motivation to combine Hou, Lacy, and Fritze, and the recited subject matter of Claim 1 is not obvious from Hou, Lacy, and Fritze.

For at least these reasons, the combination of Hou, Lacy, and Fritze do not teach or suggest the subject matter of Claim 1. Accordingly, independent Claim 1 is allowable. Claims 2-7 and 9-10 depend from Claim 1 and are allowable for the same and other reasons.

Hou does not teach or suggest the subject matter of independent Claim 22. As noted by the Examiner, Hou does not teach or suggest a chromatography cartridge comprising a plug positioned within the open end of the tubular housing and having an outer circumferential surface, at least a portion of the outer circumferential surface being fused to the inner surface of the tubular housing.

Lacy and Fritze do not cure the deficiencies of Hou. The Examiner indicates that "Lacy ... discloses spin welding a cap to the cartridge to 'meld their adjacent surfaces together' for the obvious purpose of preventing leaking." The Examiner also indicates that "Fritze ... confirms spin welding minimizes leaks." The Examiner further indicates that "it would have been obvious to spin weld in Hou ... because Lacy ... discloses spin welding a cap to the cartridge to 'meld their adjacent surfaces together' for the obvious purpose of preventing leaking and Fritze ... confirms spin welding minimizes leaks."

Hou does not disclose subject matter substantially different than either Yamada or Nakaso, which were used above in a similar rejection. In addition, Hou does not provide the necessary suggestion or motivation to be combined with Lacy and Fritze. As noted above, the Examiner stated, in U.S. Patent Application Serial No. 10/697,496, that "the recited combination of steps would not have been obvious from Yamada (U.S. Patent No. 5,693,223), Nakaso (U.S. Patent No. 5,360,544), and Lacey [sic] (U.S. Patent No. 6,280,619)." Therefore, the Examiner has failed to provide the necessary

suggestion or motivation to combine Hou, Lacy, and Fritze, and the recited subject matter of Claim 22 is not obvious from Hou, Lacy, and Fritze.

For at least these reasons, the combination of Hou, Lacy, and Fritze do not teach or suggest the subject matter of Claim 22. Accordingly, independent Claim 22 is allowable. Claims 23-28 depend from Claim 22 and are allowable for the same and other reasons.

The Examiner has rejected Claims 7 and 28 under 35 U.S.C. § 103 as being unpatentable over Hou in view of Goss.

Claim 7 depends from independent Claim 1 and is allowable for the same and other reasons. Claim 7 further specifies that the cartridge has a longitudinal axis, and further comprising a plurality of axially-directed bores defined in an upper surface of the plug to provide coupling between a mechanical drive device and the plug.

Goss does not cure the deficiencies of Hou. The Examiner indicates that "[i]t would have been obvious to have a bore in ... Hou ... because Goss ... discloses that a bore allows attachment to a drive means for spin welding." Hou and Goss are non-analogous art. In addition, the Examiner has failed to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." M.P.E.P. § 2142 citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The Examiner is simply stating what Goss discloses, and does not provide the necessary suggestion or motivation as to why the references should be combined or can be combined.

For at least these reasons, Hou and Goss do not teach or suggest the subject matter of Claim 7. Accordingly, Claim 7 is allowable.

Claim 28 depends from independent Claim 22 and is allowable for the same and other reasons. Claim 28 further specifies at least one axially-extending bore defined in an upper surface of the plug to provide coupling between a mechanical drive device and the plug.



Goss does not cure the deficiencies of Hou. As noted above, the Examiner is simply stating what Goss discloses, and does not provide the necessary suggestion or motivation as to why the references should be combined or can be combined.

For at least these reasons, Hou and Goss do not teach or suggest the subject matter of Claim 22. Accordingly, Claim 22 is allowable.

The Examiner has rejected Claims 7 and 28 under 35 U.S.C. § 103 as being unpatentable over Hou in view of Lacy and Fritze, and further in view of Goss.

Claim 7 depends from independent Claim 1 and is allowable for the same and other reasons. Claim 7 further specifies that the cartridge has a longitudinal axis, and further comprising a plurality of axially-directed bores defined in an upper surface of the plug to provide coupling between a mechanical drive device and the plug.

Goss does not cure the deficiencies of Hou, Lacy, and Fritze. As noted above, there is no suggestion or motivation to combine Hou, Lacy, and Fritze. Goss does not provide the necessary suggestion or motivation to combine Hou, Lacy, Fritze and Goss. Accordingly, Claim 7 is allowable.

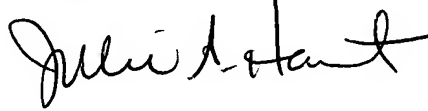
Claim 28 depends from independent Claim 22 and is allowable for the same and other reasons. Claim 28 further specifies at least one axially-extending bore defined in an upper surface of the plug to provide coupling between a mechanical drive device and the plug.

Goss does not cure the deficiencies of Hou, Lacy, and Fritze. As noted above, there is no suggestion or motivation to combine Hou, Lacy, and Fritze. Goss does not provide the necessary suggestion or motivation to combine Hou, Lacy, Fritze and Goss. Accordingly, Claim 28 is allowable.

**CONCLUSION**

In view of the foregoing, allowance of Claims 1-7, 9, 10 and 22-28 is respectfully requested. The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Julie A. Haut". The signature is fluid and cursive, with the first name "Julie" being more prominent.

Julie A. Haut  
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Docket No. 012365-9011-01  
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